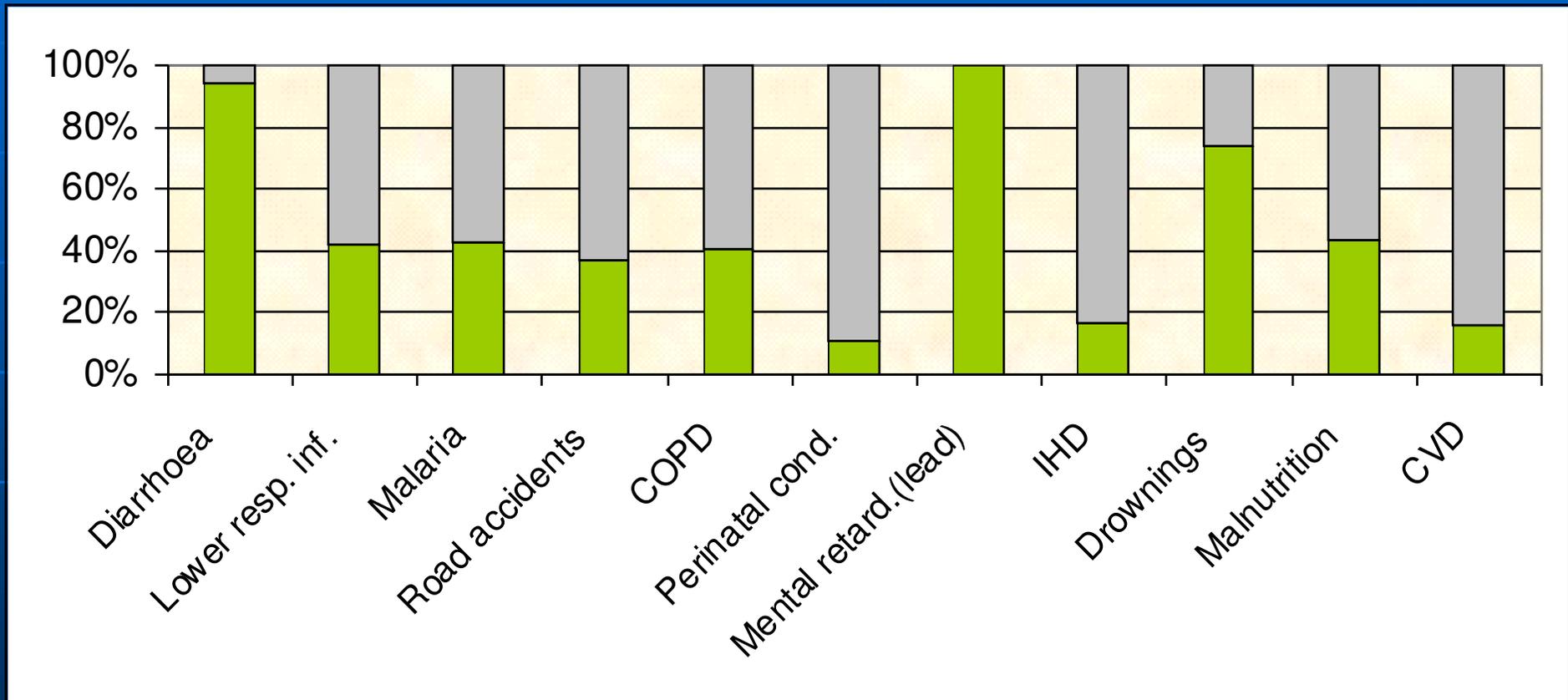


Water and Health Health and Water

Dr. Maria Neira
Director,
Public Health and the Environment
WHO



Percentage of disease that could be prevented by modifying the environment (top 10 environmental contributors to total disease burden)



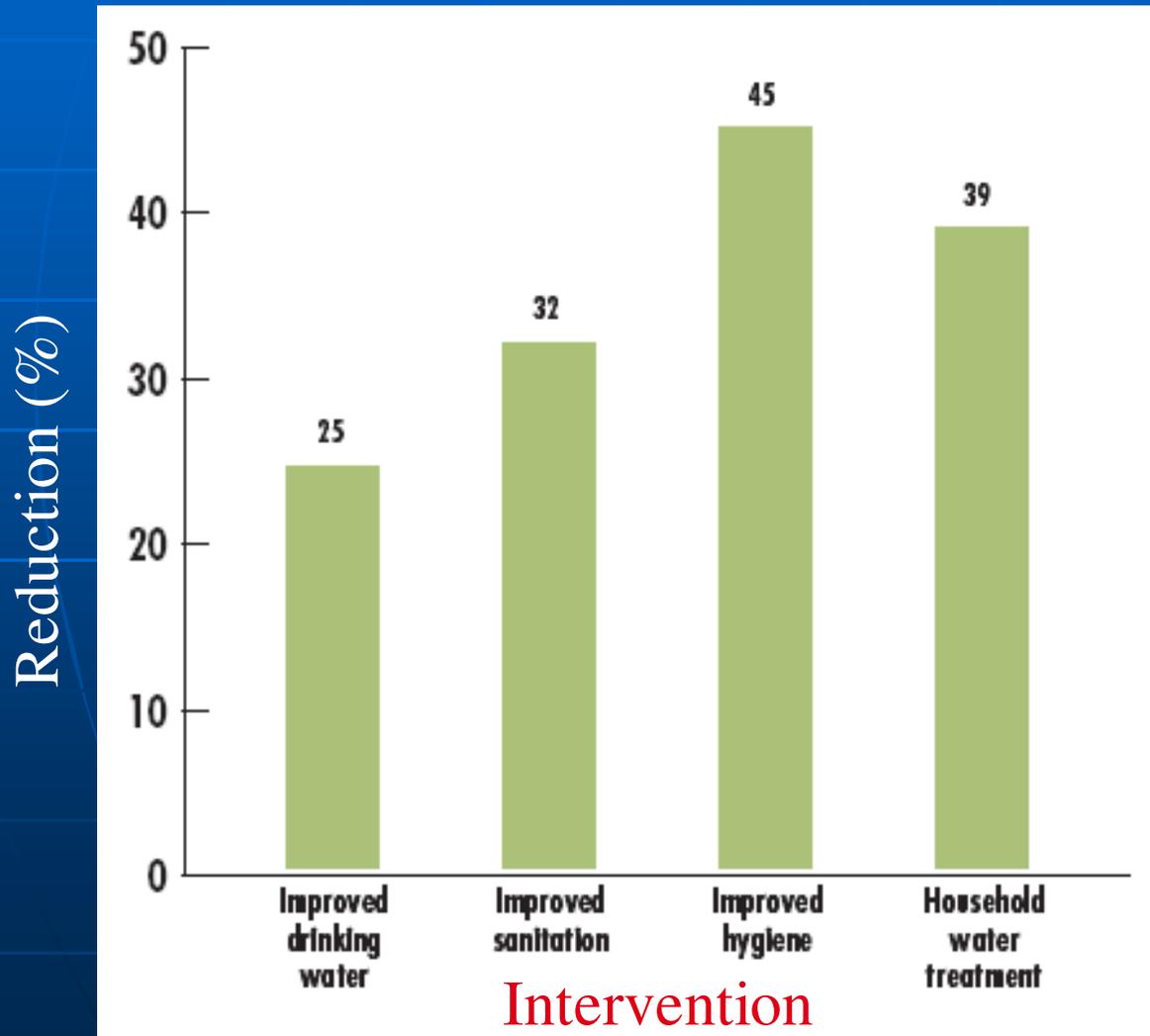
 Environmental fraction

COPD: Chronic obstructive pulmonary disease

IHD: Ischaemic heart disease

CVD: Cerebrovascular disease

Diarrhoeal disease reduction from drinking water and sanitation improvements



Source: Fewtrell L et al. Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta analysis. *Lancet Infectious Diseases*, 2005

BOD - Selected water-related diseases

- **Diarrhoea:**

1.8 million people, mostly children, die of diarrhoea every year

- **Malaria:**

1 million people, mostly children, die of malaria every year

Better management of water resources reduces transmission

- **Schistosomiasis:**

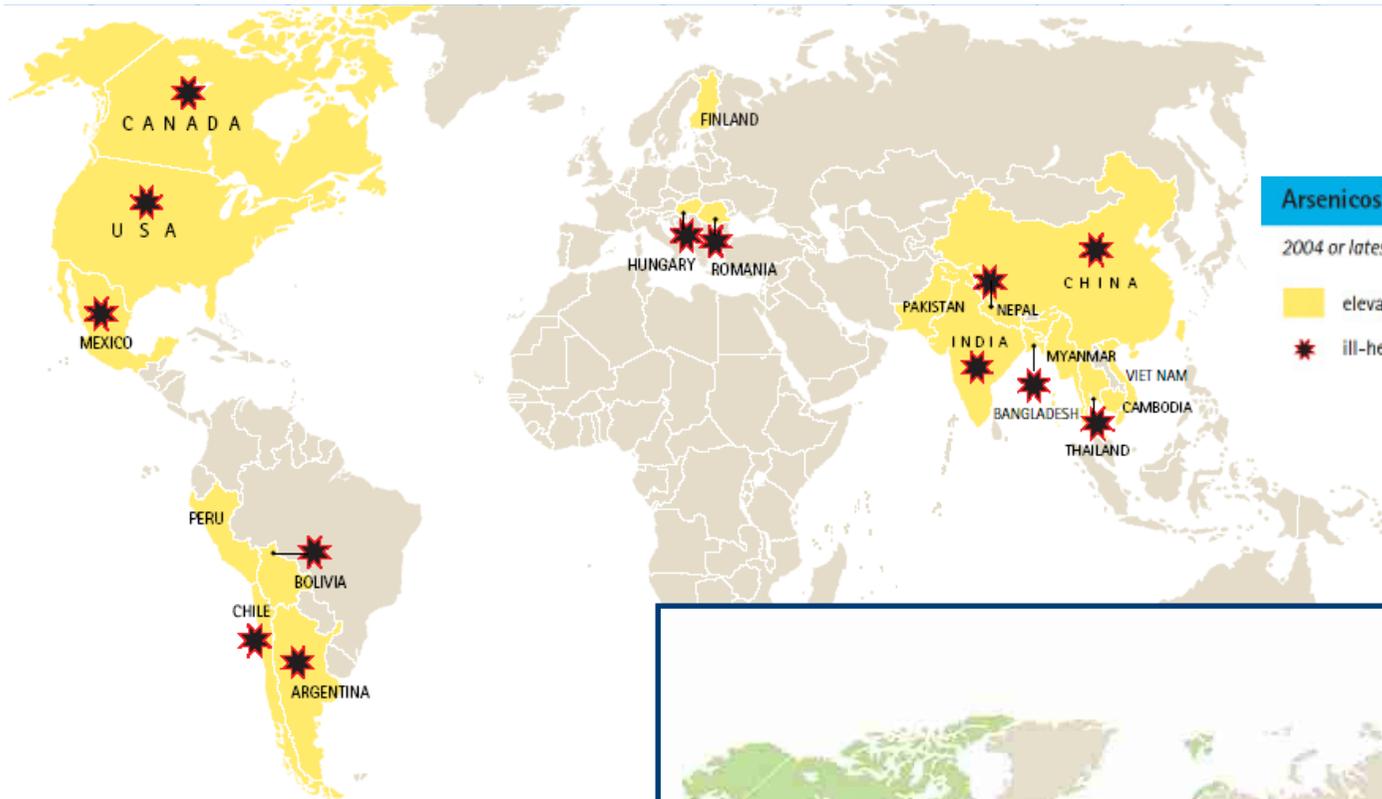
200 million are infected, 20 million suffer severe consequences

Basic sanitation reduces the diseases by up to 77%

- **Trachoma**

6 million visually impaired, 146 million threatened by blindness

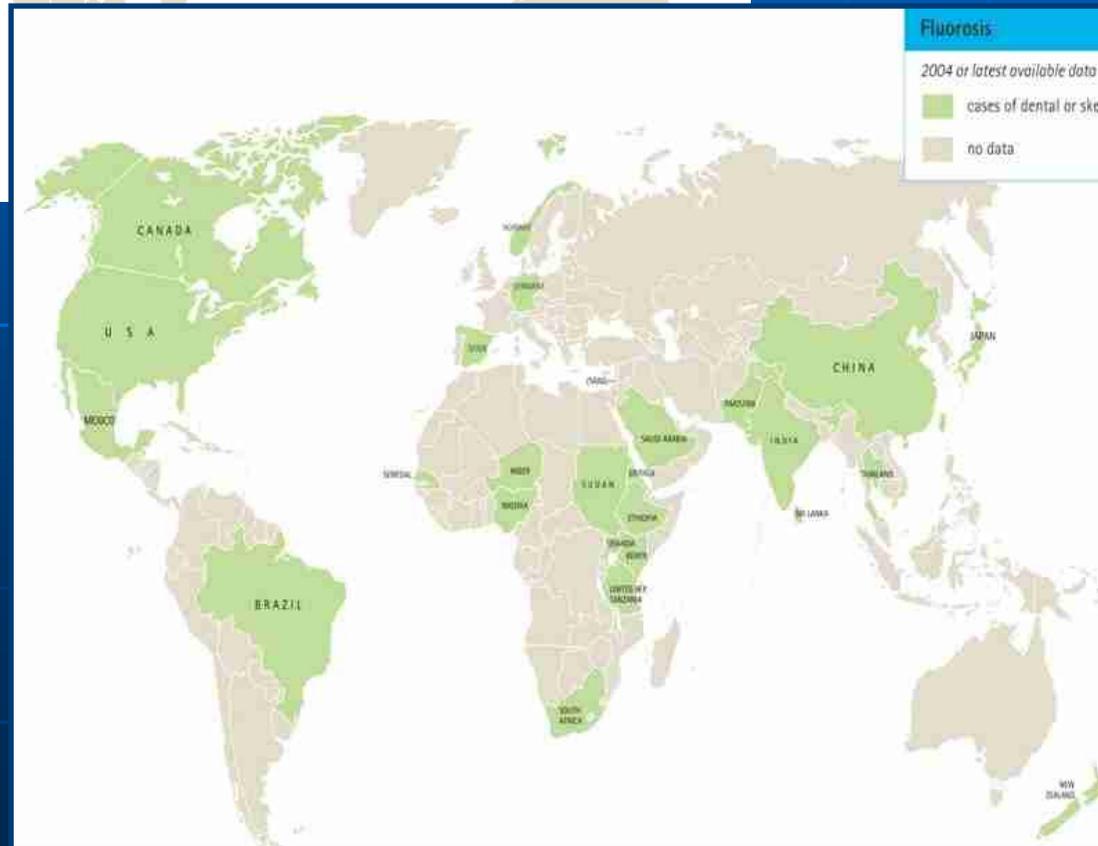
Improved sanitary conditions and hygiene practices prevents trachoma



Arsenicosis

2004 or latest available data

- elevated levels of arsenic (over 50 µg/l) reported in water
- ★ ill-health has been reported due to arsenic-contaminated water



Fluorosis

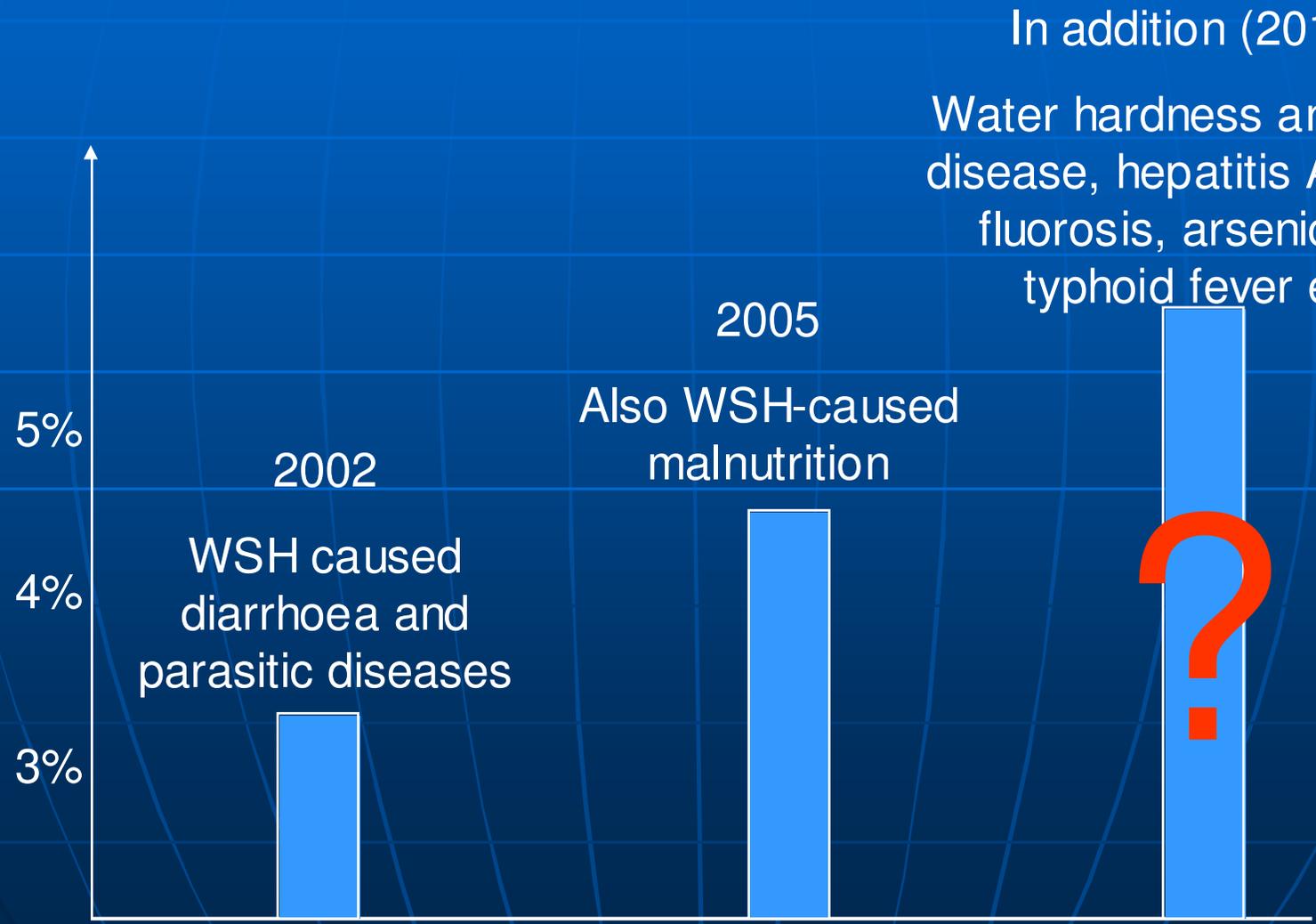
2004 or latest available data

- cases of dental or skeletal fluorosis reported
- no data



The more we know, the more environment matters

Total disease



In addition (2010?)

Water hardness and heart disease, hepatitis A and E, fluorosis, arsenicosis, typhoid fever etc.

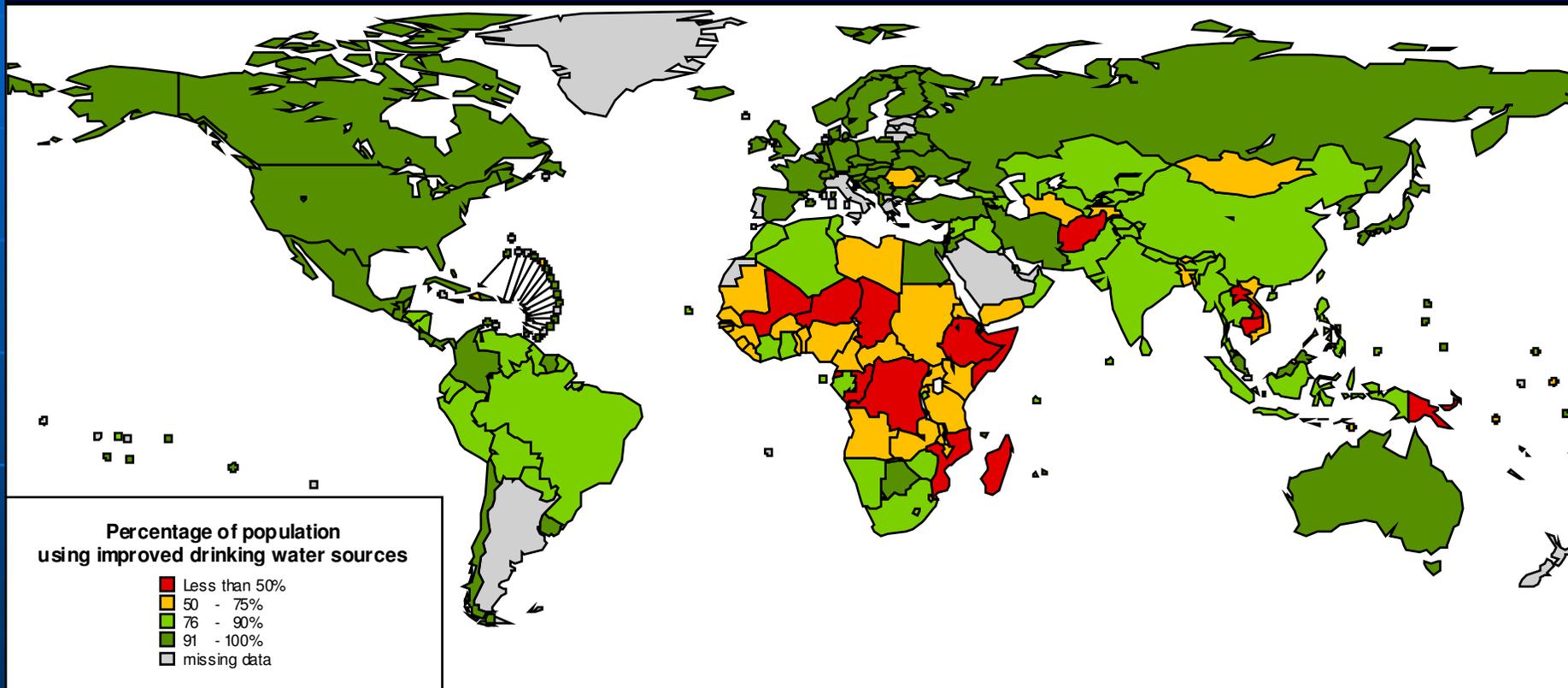
Who and where are the disadvantaged?



**World Health
Organization**

Improved Drinking Water: Status in 2002

Coverage of improved drinking water sources, 2002



*Meeting the MDG Drinking Water and Sanitation Target: Mid-term
Assessment of Progress*
WHO and UNICEF, 2004



WHO/OMS

To Fetch a Pail of Water



A heavy burden

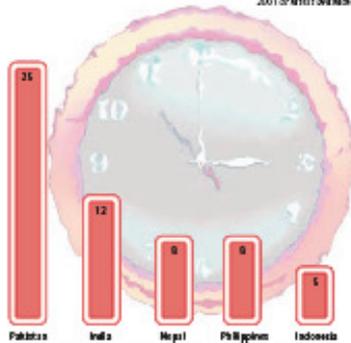
Percentage of people who must travel more than half an hour to fetch water and return home, 2001 or latest available data

- over 50%
- 26% – 50%
- 25% and under
- no data



Time ticking away

Average number of hours per household spent each month on essential water collection, 2001 or latest available data



Time spent on water collection represents time lost to household and national economies. Each month, the Indian economy misses out on over 100 million working days in this way. With its large population, Asia loses more time than any other continent.



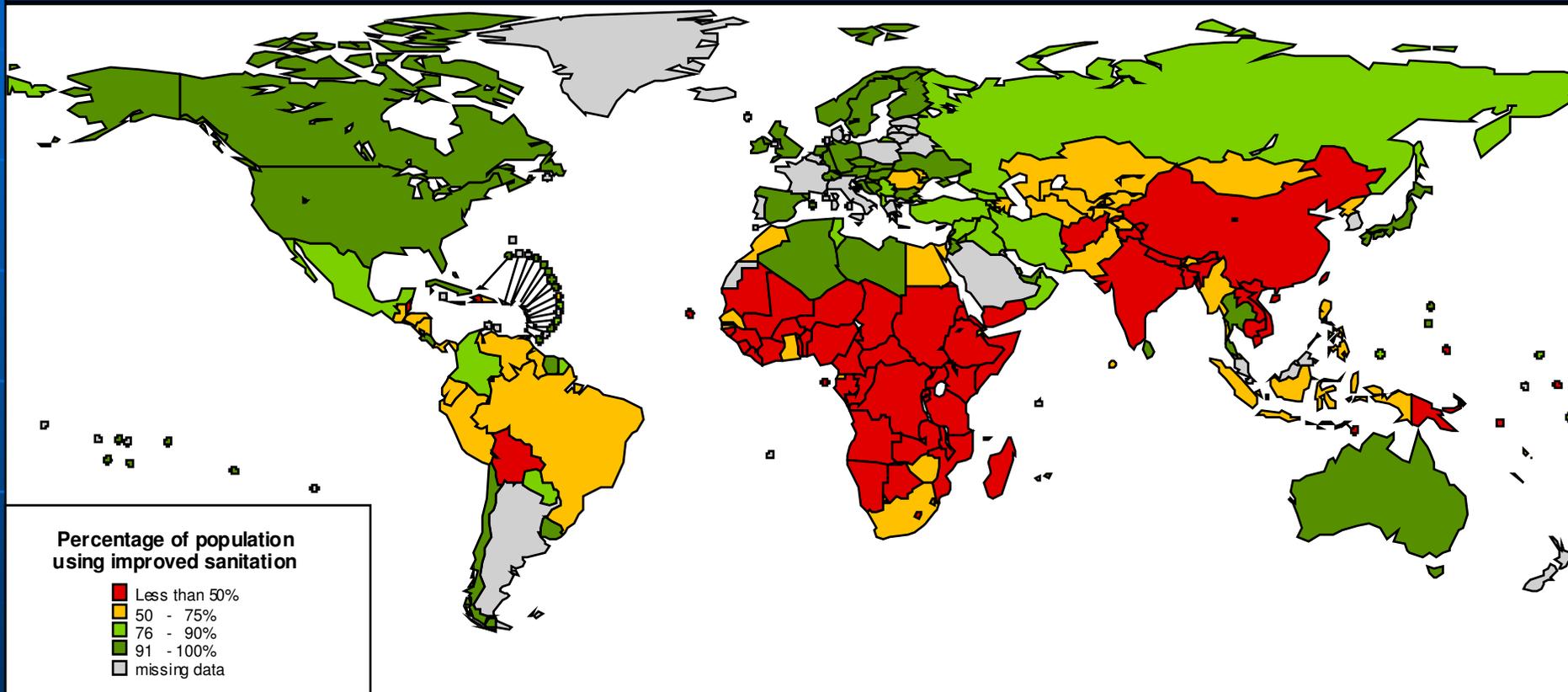
World Health Organization

Improved Sanitation: Status in 2002



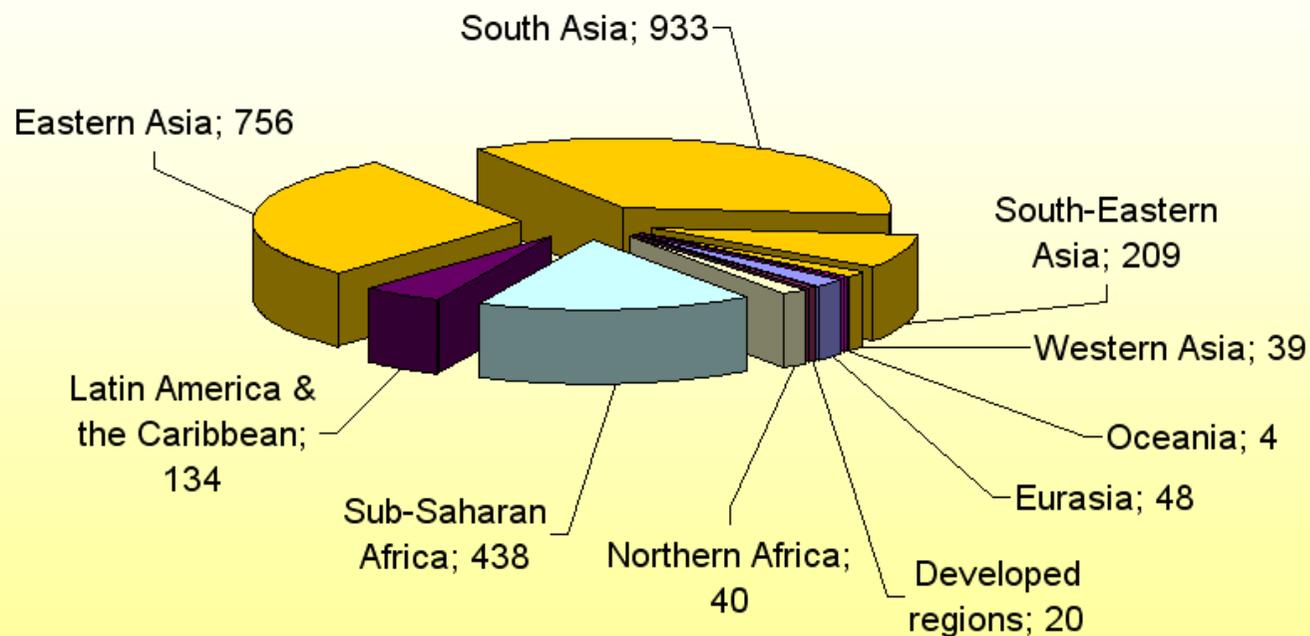
WHO/OMS

Sanitation coverage, 2002



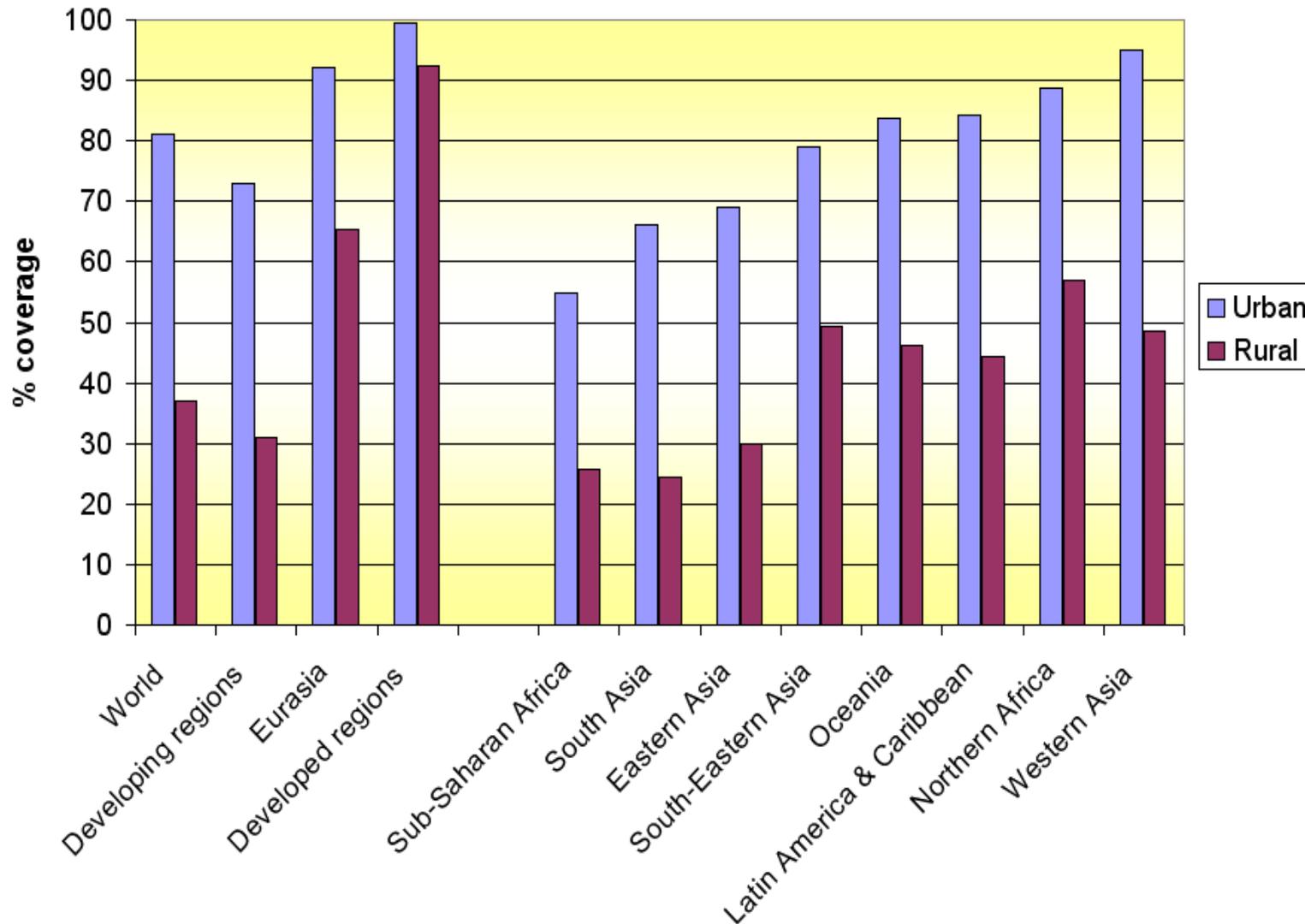
*Meeting the MDG Drinking Water and Sanitation Target: Mid-term
Assessment of Progress*
WHO and UNICEF, 2004

Improved Sanitation: Unserved population by region, 2002 (millions)



*Meeting the
MDG
Drinking
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Assessment
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WHO and
UNICEF,
2004*

Disparities Masked by National Averages: Rural versus urban sanitation (2002)



*Meeting the
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of Progress
WHO and
UNICEF,
2004*

Developed regions

- Most drinking-water outbreaks in USA (1999 – 2000) associated with private/non-community wells
- 14 – 15 million households in USA rely on private wells
- 1 in 10 Europeans (50 of 500 million people) secure drinking water from small or very small systems



**World Health
Organization**

Perspectives / trends



Reaching the MD Goals from 2002: What does it mean for Goal 7 Target

To halve, between 1990 and 2015, the proportion of the population without improved drinking water and sanitation now means means:

Enabling an additional 260 000 people a day up to 2015 to use improved drinking water sources

Enabling an additional 370 000 people a day up to 2015 to use improved sanitation

Ensuring continuation of services to an unprecedented population and maintenance and renewal of infrastructure

Reaching the MD Goals from 2002: Focusing G7 T10 on the wider goals

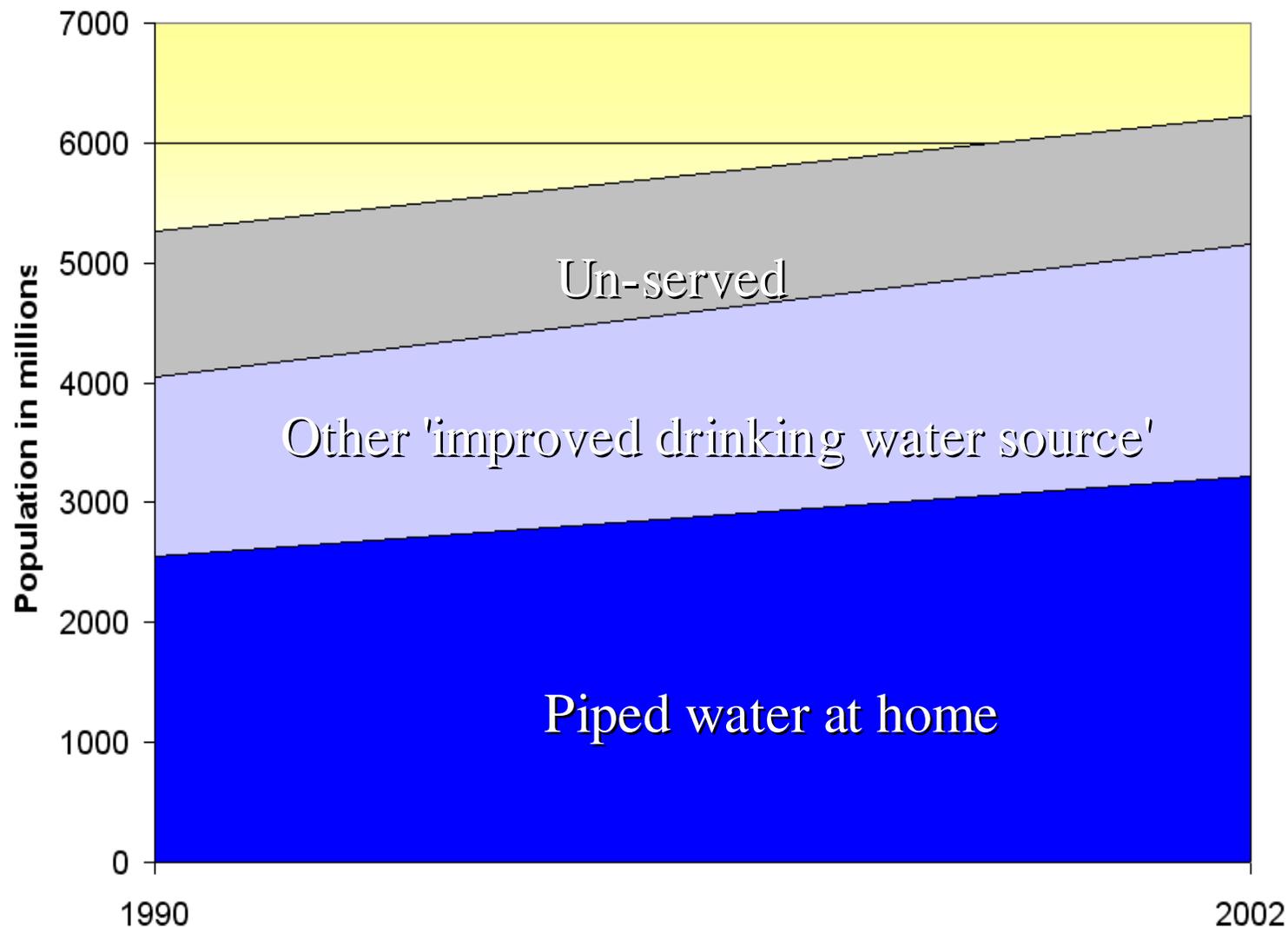
Reaching the target would:

- Reduce disease and death
- Improve nutrition and food security
- Reduce poverty (avert health care costs, time savings)

Unserved, children and women likely to benefit most (health and education)

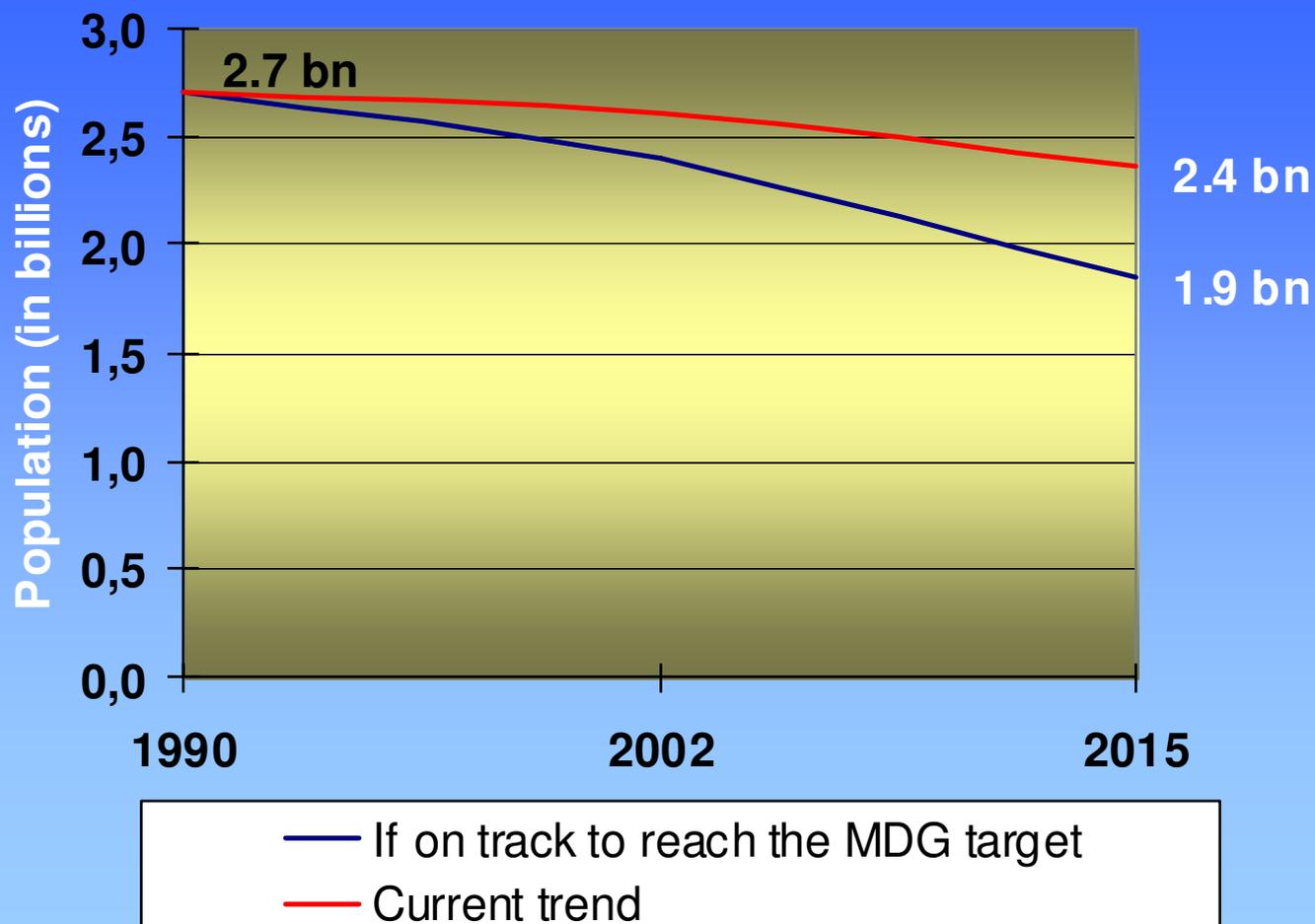
Studies show WS&S to be cost effective

Improved Drinking Water: Trends in service levels



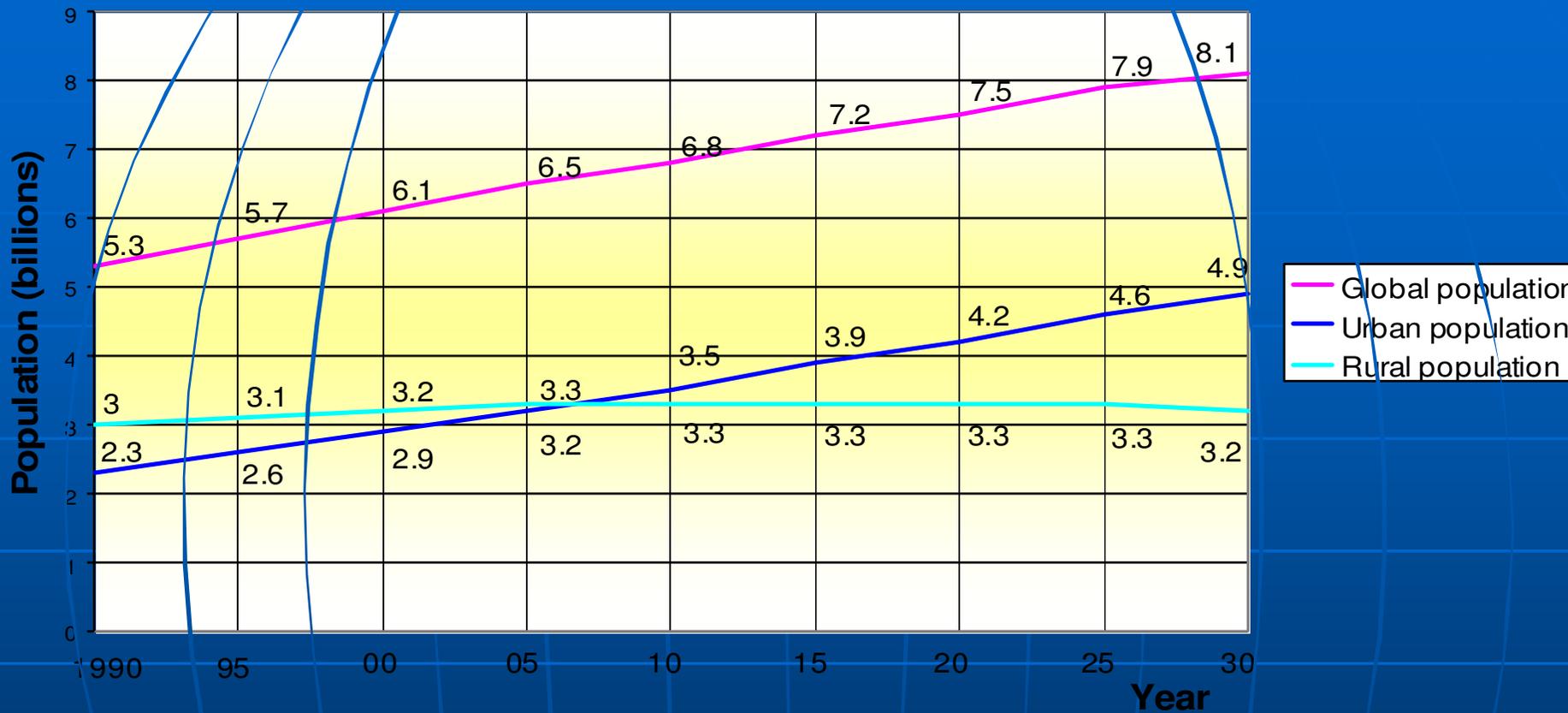
*Meeting the
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Improved Sanitation: Perspectives



*Meeting the
MDG
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UNICEF,
2004*

Population change 1990-2030



Change 1990-2002

Global: 18%

Urban: 31%

Rural: 8%

Change 1990-2015

Global: 37%

Urban: 70%

Rural: 12%

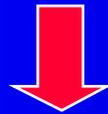
Reaching the MD Goals from 2002: Focusing G7 T10 on the wider goals

Reaching the target would:

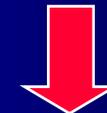
- Reduce disease and death
- Improve nutrition and food security
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Unserved, children and women likely to benefit most (health and education)

Studies show WS&S to be cost effective



1 billion urban dwellers to keep up with urban population growth – targetting slums



900 million rural dwellers to start to deal with the rural backlog

Why invest in water and sanitation?



**World Health
Organization**

Annual cost of not dealing with water and sanitation

Lives lost

- 1.6 million annually due to diarrhoea alone

Health care costs:

- USD7 billion per year to health agencies
- USD340 million to individuals

Value of time lost

- USD 63 billion per year



World Health
Organization

Thank You

www.who.int/water_sanitation_health/

